APPENDIX I – BODY AND TOOLS OF THE DECISION-MAKING AND MANAGEMENT PROCESSES, AND THEIR IMPLEMENTATION IN CNP

| Body/tools  | Description  | Implementation in CNP  |
|---|--|--|
| Park<br>Authority   | Institution with personalities of public law, legal and administrative headquarters in the territory of the Park and supervised by the Minister of the Environment. Composed by the President, the Governing Council, the Director, the Executive Council, the Auditors Council and the Park Community. Unlike the other figures, the Park Community is an advisory and proposing body, constituted by presidents of the Regions, presidents of the Provinces and mayors of the Municipalities of Park territories (these administrative figures are elected by local communities).  | Since its establishment in 1933, Circeo National Park was managed by the State Forestry Corps. Despite the entry into force of the Italian Law 394/1991, only in 2005 a specific regulatory provision established the Park Authority. Moreover, the President and the Governing Council were elected only in 2007 and the Director in 2008. The Executive Committee has not yet been established, just as the Vice-President has not yet been appointed.                       |
| Statute   | The Statute of the Park Authority, drawn up by the Governing Council and adopted by the Minister for the Environment, defines the internal organization, the modalities of popular participation, the forms of publicity of the documents.   | CNP Statute was adopted with the ministerial decree in 2009.   |
| Regulation  | The Regulation of the Park, adopted by the Park Authority, regulates the exercise of the activities allowed within the territory of the Park, including agricultural and commercial activities, transport circulation, recreational and research activities, accessibility in the Park territory, prohibited activities, etc. The Park Regulation is approved by the Minister for the Environment, after consultation with the Council and after consulting the local authorities concerned. After its publication in the Official Gazette of the Italian Republic, the Municipalities are required to adapt their regulations to the Park Regulation.   | CNP regulation was already adopted by the board of the Park authority in 2012 but will be approved by the Minister of the Environment only after the approval of the Park Plan.  |
| Park Plan<br>(PP)   | The PP regulates general organization of the territory in areas characterized by different forms of use, enjoyment and protection; restrictions, rules, destinations for public and private use; systems of vehicular and pedestrian accessibility; systems of equipment and services for the management and social function of the Park, museums, visitor centres, information offices, camping areas, agritourism activities; and criteria for interventions on flora and fauna. The PP is draft by the Park Authority, adopted by the Region of competence, after having heard the local authorities and taken into consideration the observations to the Plan that can be presented by anyone (including individuals) in writing form. The plan is published in the Official Gazette of the Italian Republic and in the Official Bulletin of the Region and is immediately binding on administrations and private individuals. | PP of CNP has remained for years in preparation and discussion. In 2011 it was approved by the Governing Council but waited for the opinion of the Park Community. Finally, on 25th of July 2017, the Regional Council of Lazio adopted the PP and the Strategic Environmental Assessment (SEA). On November 2017, CNP presented to the Region 366 observations for the PP and 150 for the SEA, but, currently, the process for the final acceptance is stopped in the Region. |
| Long-term<br>Economic<br>and Social<br>Plan (E&S<br>Plan) | Proposed by the Park Community, the E&S Plan suggests the initiatives aimed at favouring the economic and social development of the collectivises residing within the Park and adjacent territories. The E&S Plan is submitted to the binding opinion of the Governing Council and is approved by the Region.  | The draft of the E&S Plan was developed by the Park Community in the period 2002-2008, validated from a technical-administrative point of view, but not yet adopted.   |

### APPENDIX II – ADDITIONAL INFORMATION ABOUT THE POPULATION AND ECONOMIC SECTORS IN THE CNP AREA

Population of Circeo National Park's Municipalities (Data source: ISTAT, 2018; Personal communication from the Municipalities of Latina, Sabaudia, and San Felice Circeo).

| MUNICIPALITY      | MUNICIPAL<br>POPULATION | CNP POPULATION | CNP POPULATION COMPARED TO MUNICIPAL POPULATION (%) | CNP POPULATION COMPARED TO THE TOTAL CNP POPULATION (%) |
|-------------------|-------------------------|----------------|---|---|
| LATINA            | 126.151                 | 985            | 0.78  | 6.38  |
| Ponza             | 3.348                   | 0              | 0.00  | 0.00  |
| SABAUDIA          | 20.613                  | 12.418         | 60.24   | 80.45   |
| SAN FELICE CIRCEO | 10.025                  | 2.032          | 20.27   | 13.16   |
| TOTAL             | 160.137                 | 15.435         | 9.64  | 100.00  |

Number of local units of active enterprises for different economic activities (based on the Ateco 2007 classification of economic activities, which constitutes the Italian version of the European nomenclature Nace Rev.2) in the Municipalities of Sabaudia and San Felice Circeo (Data source: ISTAT, 2010\*; ISTAT, 2017a; ISTAT 2017b\*\*) and Number of employed from Sabaudia and San Felice Circeo by sections of economic activity (Data source: ISTAT, 2011).

| CLAS      | SSIFICATION OF ECONOMIC ACTIVITIES                                 | CATION OF ECONOMIC ACTIVITIES LOCAL UNITS |           |          | EMPLOYEES         |  |  |
|-----------|--|---|-----------|----------|-------------------|--|--|
|           | co <b>2007)</b>  | O07) SABAUDIA SAN FELICE CIRCEO           |           | Sabaudia | SAN FELICE CIRCEO |  |  |
| <b>A1</b> | AGRICULTURE  | 679*                                      | 253*      |          |                   |  |  |
| A2        | FORESTRY   | DATA NOT                                  | DATA NOT  | 1533     | 619               |  |  |
| А3        | FISHING  | AVAILABLE                                 | AVAILABLE |          |                   |  |  |
| В         | EXTRACTION OF MINERALS FROM QUARRIES AND MINES                     | 1   | 0         |          |                   |  |  |
| С         | INDUSTRY AND CRAFTS (TRANSFORMATION OF RAW MATERIALS)              | 105                                       | 57        |          |                   |  |  |
| D         | SUPPLY OF ELECTRICITY, GAS, STEAM, AND AIR CONDITIONING            | 5   | 1         | 1210     | 586               |  |  |
| E         | WATER SUPPLY SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES | 3   | 2         |          |                   |  |  |
| F         | Buildings  | 113                                       | 79        |          |                   |  |  |
| G         | WHOLESALE AND RETAIL TRADE   | 369                                       | 226       | 4.442    | 627               |  |  |
| ı         | HOTEL AND CATERING SECTOR  | 128                                       | 111       | 1413     | 637               |  |  |
| Н         | TRANSPORT AND STORAGE  | 26  | 19        |          |                   |  |  |
| J         | INFORMATION AND COMMUNICATION SERVICES                             | 29  | 7         | 344      | 174               |  |  |
| К         | FINANCIAL AND INSURANCE ACTIVITIES                                 | 32  | 16        |          |                   |  |  |
| L         | REAL ESTATE ACTIVITIES   | 51  | 24        |          |                   |  |  |
| М         | PROFESSIONAL, SCIENTIFIC, AND TECHNICAL ACTIVITIES                 | 118                                       | 73        | 684      | 303               |  |  |
| N         | RENTAL, TRAVEL AGENCIES, BUSINESS AND SUPPORT SERVICES             | 44  | 30        |          |                   |  |  |
| 0         | PUBLIC ADMINISTRATION AND DEFENCE                                  | 2**                                       | 1**       |          |                   |  |  |
| Р         | EDUCATION  | 12  | 4         |          |                   |  |  |
| Q         | HEALTH AND SOCIAL ASSISTANCE                                       | 76  | 26        | 2125     | 668               |  |  |
| R         | ARTISTIC, SPORTING, AND ENTERTAINMENT ACTIVITIES                   | 21  | 26        | 2125     | 008               |  |  |
| S         | OTHER ACTIVITIES   | 64  | 51        |          |                   |  |  |

#### APPENDIX III – TYPOLOGY AND DESCRIPTION OF REFERENCES USED IN THE CASE STUDY ANALYSIS

| Typology   | Description               | References  |
|------------|---------------------------|---|
| Official   | Constitution of the Park  | Gazzetta Ufficiale della Repubblica Italiana (2005). Decreto del Presidente |
| Italian    |                           | della Repubblica 2005, n. 155. Istituzione dell'Ente Parco Nazionale del    |
| Laws       |                           | Circeo. Pdf file retrieved from: https://www.minambiente.it/sites/          |
|            |                           | default/files/dpr_04_04_2005_pn_circeo.pdf                                  |
|            | National framework law    | Gazzetta Ufficiale della Repubblica Italiana (2018). Legge 6 dicembre       |
|            | on protected areas        | 1991, n. 394. Legge Quadro sulle Aree Protette. Pdf file retrieved from:    |
|            |                           | http://www.gazzettaufficiale.it/eli/id/1991/12/13/091G0441/sg               |
|            | Approval of the Statute   | Ministero dell'Ambiente e della Tutela del Territorio e del Mare (2008).    |
|            | of the Circeo National    | CD PNC 22 dicembre 2008, n. 27. Approvazione dello Statuto Ente Parco       |
|            | Park                      | Nazionale del Circeo. Pdf file retrieved from:                              |
|            |                           | https://www.minambiente.it/sites/default/files/archivio/normativa/          |
|            |                           | statuto_ente_parco_circeo_22072009.pdf                                      |
|            | Report on the state of    | Ministero dell'Ambiente e della Tutela del Territorio e del Mare (2012).    |
|            | implementation of the     | Relazione sullo stato di attuazione della legge n. 394 del 1991. Pdf file   |
|            | law on protected areas    | retrieved from: https://www.minambiente.it/sites/default/files/             |
|            |                           | archivio/allegati/trasparenza_valutazione_merito/                           |
|            |                           | STATO%20DI%20ATTUAZIONE%20DELLA%20LEGGE%                                    |
|            |                           | 206%20DICEMBRE%201991%20-%20anni%202011-2012.pdf                            |
| Policy     | Scheme of the CNP-plan    | Ente Parco Nazionale del Circeo (2010). Schema di Piano del Parco. Pdf      |
| documents  | Serieme of the civi plan  | file retrieved from: http://www.parcocirceo.it/pagina.php?id=110            |
|            | Regulation of the Park    | Ente Parco Nazionale del Circeo (2011a). Piano del Parco Nazionale del      |
| of the CNP | Regulation of the Fark    | Circeo. Regolamento. Pdf file retrieved from:                               |
|            |                           | http://www.parcocirceo.it/pagina.php?id=110                                 |
|            | CNP-plan (volume 1-3      | Ente Parco Nazionale del Circeo (2011b). Piano del Parco Nazionale del      |
|            | 1                         | Circeo. Relazione Generale –Tomo 1.   |
|            | and implementing          |   |
|            | technical standards)      | Ente Parco Nazionale del Circeo (2011c). Piano del Parco Nazionale del      |
|            |                           | Circeo. Relazione Generale – Tomo 2.  |
|            |                           | Ente Parco Nazionale del Circeo (2011d). Piano del Parco Nazionale del      |
|            |                           | Circeo. Relazione Generale – Tomo 3.  |
|            |                           | Ente Parco Nazionale del Circeo (2012). Piano del Parco Nazionale del       |
|            |                           | Circeo. Norme tecniche di attuazione.                                       |
|            | 20 511                    | All Pdf files retrieved from: http://www.parcocirceo.it/pagina.php?id=110   |
|            | Map of the zoning         | Ente Parco Nazionale del Circeo (2011e). Tavola 2 – Carta della             |
|            |                           | zonizzazione. Pdf file retrieved from:                                      |
|            |                           | http://www.parcocirceo.it/pagina.php?id=110                                 |
|            | Map of ecosystem          | Fondo Europeo Agricolo per lo Sviluppo Rurale (2013). <i>Programma di</i>   |
|            | services values           | Sviluppo Rurale 2007-2013 – Carta della valenza dei servizi ecosistemici.   |
|            |                           | Pdf files retrieved from: http://www.parcocirceo.it/pagina.php?id=112       |
|            |                           | (Tav.I.1 and Tav.I.2)   |
|            | Strategic environmental   | Parco Nazionale Del Circeo (2016). Piano Del Parco – Valutazione            |
|            | assessment                | Ambientale Strategica – Rapporto Ambientale 12/2016. Pdf file retrieved     |
|            |                           | from: http://www.parcocirceo.it/pagina.php?id=110                           |
| Websites   | Official website of the   | Parco Nazionale del Circeo (2018a). Parco Nazionale del Circeo. Online:     |
|            | Park                      | http://www.parcocirceo.it/  |
|            | Online grey literature of | Parco Nazionale del Circeo (2018b). News. Online:                           |
|            | the Park in the period    | http://www.parcocirceo.it/nov.php   |
|            | January 2016-December     | Parco Nazionale del Circeo (2018c). Rassegna stampa. Online:                |
|            | 2018 (news and press      | http://www.parcocirceo.it/rassegna.php                                      |
|            | review)                   |   |

| Typology    | Description                                | References  |
|-------------|--|---|
| Secondary   | Data about Municipal                       | ISTAT – Istituto Nazionale di Statistica (2018). Popolazione residente al 1°  |
| data        | populations                                | gennaio 2018. Dati scaricati da:  |
|             |  | http://dati.istat.it/Index.aspx?DataSetCode=DCIS_POPRES1  |
|             | Data of the Park                           | Personal communication from the Municipalities of Latina, Sabaudia, and   |
|             | population                                 | San Felice Circeo   |
|             | Data of active                             | ISTAT – Istituto Nazionale di Statistica (2010). Censimento Agricoltura   |
|             | enterprises and                            | 2010. Dati scaricati da: http://dati-   |
|             | employed for different                     | censimentoagricoltura.istat.it/Index.aspx?lang=it   |
|             | economic activities                        | ISTAT – Istituto Nazionale di Statistica (2011). Censimento Popolazione<br>Abitazioni 2011. Dati scaricati da: http://dati- |
|             |  | censimentopopolazione.istat.it/Index.aspx?lang=it   |
|             |  | ISTAT – Istituto Nazionale di Statistica (2017a). Classe di addetti e settori   |
|             |  | economici delle unità locali, anno 2017. Dati scaricati da:   |
|             |  | http://dati.istat.it/Index.aspx?DataSetCode=DICA_ASIAULP  |
|             |  | ISTAT – Istituto Nazionale di Statistica (2017b). Censimento delle  |
|             |  | istituzioni pubbliche, anno 2017. Dati scaricati da: http://dati-   |
|             |  | censimentipermanenti.istat.it/  |
|             | Data of the Park Plan                      | Personal communication from the Circeo National Park  |
|             | initiatives in 2017                        |   |
|             | Data used for the land                     | ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale  |
|             | cover map                                  | (2018). Corine Land Cover 2018. Dati scaricati da:  |
|             |  | http://groupware.sinanet.isprambiente.it/uso-copertura-e-consumo-di-  |
|             |  | suolo/library/copertura-del-suolo/corine-land-cover/corine-land-cover-  |
|             |  | 2018-iv-livello   |
| Scientific  | Spatial connectivity and                   | Acosta, A., Blasi, C., Stanisci, A. (2000). Spatial connectivity and boundary   |
| literature  | boundary patterns in                       | patterns in coastal dune vegetation in the Circeo National Park, Central  |
| about the   | coastal dune vegetation                    | Italy. Journal of Vegetation Science, 11(1), 149–154.   |
| case study  | in the Circeo National                     | https://doi.org/10.2307/3236787   |
| case state, | Park, Central Italy                        |   |
|             | Coastal dynamics vs                        | Aretano, R., Parlagreco, L., Semeraro, T., Zurlini, G., Petrosillo, I. (2017).  |
|             | beach users attitudes                      | Coastal dynamics vs beach users attitudes and perceptions to enhance  |
|             | and perceptions to                         | environmental conservation and management effectiveness. <i>Marine</i>  |
|             | enhance environmental                      | Pollution Bulletin, 123(1–2), 142–155.  |
|             | conservation and                           | https://doi.org/10.1016/j.marpolbul.2017.09.003   |
|             | management                                 |   |
|             | effectiveness                              |   |
|             | Local Community                            | Buono, F., Pediaditi, K., Carsjens, G. J. (2012). Local Community   |
|             | Participation in Italian                   | Participation in Italian National Parks Management: Theory versus   |
|             | National Parks                             | Practice. Journal of Environmental Policy and Planning, 14(2), 189–208.   |
|             | Management: Theory versus Practice         | https://doi.org/10.1080/1523908X.2012.683937  |
|             |  | Manca, F. (2014). Study of seawater intrusion in the coastal areas of   |
|             | Study of seawater intrusion in the coastal | Circeo National Park and Litorale Romano Natural Reserve, for the   |
|             | areas of Circeo National                   | implementation of numerical modeling methods. Università Degli Studi  |
|             | Park and Litorale                          | Roma Tre, Thesis volume. Pdf file retrieved from:   |
|             | Romano Natural                             | http://hdl.handle.net/2307/4368   |
|             | Reserve, for the                           | 1111.p., / Haishanancine y 2007/ 4000   |
|             | implementation of                          |   |
|             | numerical modelling                        |   |
|             | methods                                    |   |
|             | Environmental effects of                   | Sappa, G., Rossi, M., Coviello, M. (2005). Effetti ambientali del   |
|             | over-exploitation of the                   | sovrasfruttamento degli acquiferi della Pianura Pontina (Lazio). Aquifer  |
|             | aquifers of the Pontine                    | Vulnerability and Risk 2nd International Workshop, 1–16. Pdf file   |
|             | Plain (Lazio)                              | retrieved from: https://www.researchgate.net/publication/260257063_   |
|             |  | Effetti_ambientali_del_sovrasfruttamento_degli_acquiferi_della_Pianura  |
|             |  | TELICILI AHDICHLAH UCI SOVIASHULLAHING HERH ALBUHEH HENA FIAHINA  |

# APPENDIX IV – IDENTIFICATION OF ES IN THE CASE STUDY AREA BASED ON THE POLICY DOCUMENTS, according to the Common International Classification of Ecosystem Services (Haines-Young & Potschin, 2011) and the Economics of Ecosystems and Biodiversity (TEEB, 2010) classifications

| CNP policy do  | cuments  | CICES and TEEB classification  |  |                        |  |
|--|--|--|--|------------------------|--|
| Datasheet of Environmental   | General and specific   | Examples and   | Ecosystem  | Group                  |  |
| Strategic Assessment   | objectives and other   | indicative benefits  | service  |                        |  |
|  | contents of the Park Plan  |  |  |                        |  |
| E8B: Sustainable agricultural supply chain with greenhouse and field cultivation E8C: Promotion and enhancement of sustainable multifunctional agriculture E8D: Realization of a quality/biologic rural-tourist district   | G. Ob. 11: Local economic sectors S. Ob. 4.B: Sustainable agriculture Art. 39: Agricultural surfaces   | Commercial cropping<br>(cereals, vegetables,<br>fruits)                            | Food   | PROV                   |  |
| B2D.1: Identification of a scientific<br>management model of the fish<br>populations present in the coastal<br>lakes<br>B3D and B3E: Coordination of socio-<br>economic activities on Paola Lake   | S. Ob. 4.C: Fishing and aquaculture Art. 40: Lake surfaces aimed at aquaculture  | Commercial fishing (mussels)   | Food   | PROVISIONING           |  |
| B1H: Sustainable mushroom harvest in the forest  | -  | Harvesting wild plants<br>and animals for food<br>(mushrooms)                      | Food   |                        |  |
| B1E: Increased suitability of the buildings surrounding the forest for the bats' shelter B1F: Reduction of the load of wild boar in the forest B1G: Elimination of fallow deer disturbance in the forest B2C.2: Creation of suitable habitats for the reproduction of species of waterfowl target in the coastal lakes B4A.5: Observatory implementation for monitoring the migration of birds of prey B5A: Monitoring of Zannone biodiversity B2D.3-4: Numerical control of alien Nutria and tortoises B5B: Management of the mouflon in Zannone C1, C2, C3: Conservation of species and habitats of national, community and international interest | G. Ob. 1-5: Conservation of biodiversity, habitat and species S. Ob. 2: Conservation of species and habitats of national, community and international interest Art. 20: Protection of biodiversity | Maintaining nursery populations (habitat refugees) and maintenance of biodiversity | Lifecycle<br>maintenance<br>and genetic<br>pool protection | REGULATING AND HABITAT |  |

| CNP policy do   | cuments   | CICES and TI   | EB classification                     |                        |
|---|---|--|---------------------------------------|------------------------|
| Datasheet of Environmental<br>Strategic Assessment  | General and specific objectives and other contents of the Park Plan   | Examples and indicative benefits                     | Ecosystem service                     | Group                  |
| B7B: Sustainable management of the dune system E5: Sustainable development of dune areas  | G. Ob. 7: Coastal erosion S. Ob.4.A: Conservation of the dune system S. Ob. 4.A: Sustainable beach management and defence of the dunes Art. 18: Protection of the soil resource   | Erosion protection                                   | Erosion<br>prevention                 | RE                     |
| -   | Art. 19: Protection of the quality of the art and the urban environment   | Air purification and oxygenation                     | Air purification                      | GULATING               |
| B2A.1: Improvement of the chemical-physical water quality parameters in coastal lakes B2A.2: Activation of new scoops of Fogliano Lake B2A.3: Activation of agreement protocol with ARPA Lazio on water quality monitoring B3A: Purification of the waters of Paola Lake E11: Sustainable management of the water and material cycle  | Art. 17: Protection of water resources  | Water purification and oxygenation                   | Water<br>purification                 | REGULATING AND HABITAT |
| B1A: Sustainable use of the forest B2C.1: Regulation and organization of tourist access to the shores of coastal lakes B2C.3: Construction of a Monitoring Centre for the coastal wetlands of the Park B4A.2: Sport climbing regulation B4A.3: Tourist use of the Promontory B4C.1: Recovery and use of the promontory caves B5C: Sustainable development of the island of Zannone B5F: Hospitable Zannone B7B: Sustainable management of the dune system E5: Sustainable development in dune areas E6A: Sustainable tourism development plan for the Island of Zannone | G. Ob. 11: Local economic sectors S. Ob. 4.A: Naturalistic tourism S. Ob. 4.A: Sustainable beach management and defence of the dunes Art. 35: Areas of environmental interest compatible with touristic and hotel activities Map: Ecotourism                                | Recreational and sports activities                   | Recreation and tourism                | CULTURAL               |
| B4B.4: Hydrogeological risk management in a way that is compatible with the environmental and landscape value   | G. Ob. 12: Landscape, archaeological, monumental, historical and cultural heritage Art. 24: Protection and enhancement of heritage of historical, architectural and environmental value Art. 27: Areas of particular historical and landscape value Map: Landscape heritage | Areas of outstanding natural beauty and tranquillity | Aesthetic values                      |                        |
| F1: Plan of the researches and of the monitors considered priority F2: Information and environmental education  | S. Ob. 5: Promotion and promotion of research, monitoring, information and environmental education activities   | Scientific research and environmental education      | Information for cognitive development |                        |

## APPENDIX V – DISTRIBUTION (IN %) OF QUESTIONNAIRE RESPONDENTS, MAP OF HOUSE AND WORK AREAS IN THE QUESTIONNAIRE

0

| Gender   |      |
|--|------|
| F  | 48   |
| M  | 52   |
| Age  |      |
| 18-24  | 7.7  |
| 25-34  | 15.2 |
| 35-44  | 18.4 |
| 45-54  | 19.1 |
| 55-64  | 14.9 |
| 65-74  | 13.2 |
| >75  | 11.6 |
| Qualification                                      |      |
| Elementary school                                  | 4.9  |
| High school  | 46.4 |
| Master   | 3.7  |
| Middle school                                      | 15.3 |
| None   | 0.6  |
| PhD  | 0.5  |
| University   | 28.6 |
| Occupation   |      |
| No answer  | 2.6  |
| Disabled and/or unsuitable                         | 0.9  |
| Full time worker                                   | 39.7 |
| Housework or assistance                            | 4.6  |
| Inactive   | 0.1  |
| Part time worker                                   | 9    |
| Retired or Cessation                               | 27.7 |
| Student/Professional training                      | 8.3  |
| Unemployed   | 6.3  |
| Unpaid work experience                             | 0.7  |
| Business sectors                                   |      |
| Agriculture. Livestock and Forestry                | 9.8  |
| Fishing and Aquaculture                            | 1.5  |
| Industry and Crafts (transformation of raw         |      |
| materials)   | 8.7  |
| Buildings  | 1.1  |
| Wholesale and retail trade                         | 6.4  |
| Hotel and catering sector                          | 6.3  |
| Financial. insurance and real estate activities    | 3.3  |
| Education  | 11.9 |
| Public administration and defence                  | 16.1 |
| Professional. scientific. and technical activities | 9.8  |
| Rental. travel agencies. business support          | უ.გ  |
| services   | 1.4  |
| Transport and storage                              | 0.2  |
| Other activities                                   | 23.6 |
| Other activities                                   | ۷۵.0 |

| Municipality of residence |      |  |  |  |
|---------------------------|------|--|--|--|
| Sabaudia                  | 66.7 |  |  |  |
| San Felice Circeo         | 33.3 |  |  |  |
| House Area                |      |  |  |  |
| A (CNP area)              | 1.5  |  |  |  |
| В                         | 11.2 |  |  |  |
| C (CNP area)              | 40.8 |  |  |  |
| D                         | 6.7  |  |  |  |
| E (CNP area)              | 7.8  |  |  |  |
| F                         | 19.6 |  |  |  |
| G (CNP area)              | 12.3 |  |  |  |
| Work area                 |      |  |  |  |
| A (CNP area)              | 8.0  |  |  |  |
| В                         | 3.7  |  |  |  |
| C (CNP area)              | 18.1 |  |  |  |
| D                         | 2    |  |  |  |
| E (CNP area)              | 4.5  |  |  |  |
| F                         | 8.2  |  |  |  |
| G (CNP area)              | 6.9  |  |  |  |
| No work                   | 35.1 |  |  |  |
| Other areas               | 20.6 |  |  |  |
| Proximity to the Park     |      |  |  |  |
| House                     | 62.4 |  |  |  |
| Work                      | 30.3 |  |  |  |
| House & Work              | 24.4 |  |  |  |



### APPENDIX VI – QUESTIONNAIRE FOR THE CASE STUDY (<u>UNDERLINED QUESTIONS</u> HAVE BEEN USED FOR THE RESULTS OF THIS PUBLICATION)

#### PERCEPTION OF CIRCEO NATIONAL PARK

Welcome to the "Perception of Circeo National Park" questionnaire. The survey, carried out as part of a Ph.D. research at La Sapienza University, aims to analyse the perception and importance of Circeo National Park for the citizens of Sabaudia and San Felice Circeo. The questionnaire is anonymous, and the data collected will be treated in an aggregate manner, in compliance with the law on privacy. This analysis is carried out in collaboration with Circeo National Park and, therefore, the results can be used by the Park in order to improve its services.

\* Questions marked with asterisk are mandatory

#### **Perception of Circeo National Park territory**

The first sections of the questionnaire will ask to answer the questions based on your knowledge and personal opinions. Feel free to answer in total sincerity as the questionnaire is anonymous and the data collected will be treated in an aggregate manner, in compliance with the law on privacy.

| 1. | Which of the following natural environments are part of Circeo National Park? You can mark one or more answers        |
|----|---|
|    | ☐ Forest  |
|    | ☐ Circeo Promontory   |
|    | ☐ Paola and Caprolace Lakes   |
|    | ☐ Fogliano and Monaci Lakes   |
|    | ☐ Sabaudia dunes  |
|    | ☐ San Felice Circeo dunes   |
|    | ☐ Islands of Ponza and Palmarola  |
|    | ☐ Island of Zannone   |
|    | □ None  |
| 2. | Which of the following inhabited areas are part of Circeo National Park? You can mark one or more answers             |
|    | ☐ Sabaudia city   |
|    | ☐ Old town of San Felice Circeo   |
|    | ☐ Molella   |
|    | ☐ Baia d'Argento  |
|    | □ None  |
| 3. | On which of the following Municipalities does Circeo National Park territory extend? You can mark one or more answers |
|    | ☐ Latina  |
|    | ☐ Ponza   |
|    | ☐ Sabaudia  |
|    | ☐ San Felice Circeo   |

### **Perception of Circeo National Park activities**

| 4. | Which of the following activities are carried out by Circeo National Park? You can mark one or more answers                  |
|----|--|
|    | ☐ Firefighting   |
|    | ☐ Forest Rangers   |
|    | ☐ Authorizations   |
|    | ☐ Summer events organization   |
|    | ☐ Agriculture promotion  |
|    | ☐ Touristic promotion  |
|    | ☐ Excursions and environmental education   |
|    | □ None   |
| 5. | Who manages Circeo National Park? You can mark one or more answers   |
|    | ☐ Sabaudia Municipality  |
|    | ☐ San Felice Circeo Municipality   |
|    | ☐ Forest Rangers   |
|    | ☐ Park Authority   |
|    | ☐ Lazio Region   |
| 6. | How does the presence of Circeo National Park impact on its activities or those of its family? *You can mark only one answer |
|    | In no way  |
|    | Negatively   |
|    | Positively   |
| 7. | Why?   |
|    |  |
|    |  |
|    |  |

| problems and ter   |            |             | zens?      |             |              |                 |                    |
|--|------------|-------------|------------|-------------|--------------|-----------------|--------------------|
| You can mark onl   | y one an   | swer        |            |             |              |                 |                    |
|  | 1          | 2           | 3          | 4           |              |                 |                    |
|  |            |             |            |             |              |                 |                    |
| Very low   |            |             |            |             | Very high    |                 |                    |
|  |            |             |            |             |              |                 |                    |
| Select the theme<br>initiatives and/or<br>You can mark one | events.    |             |            | deration    | by Circeo Na | itional Park ir | n the implementati |
| ☐ Agriculture  |            |             |            |             |              |                 |                    |
| ☐ Cultural herita  | ige        |             |            |             |              |                 |                    |
| ☐ Biodiversity   |            |             |            |             |              |                 |                    |
| ☐ Deterioration  | and envi   | ronmenta    | l pollutio | on          |              |                 |                    |
| ☐ Park presenta  | tion       |             |            |             |              |                 |                    |
| ☐ Promotion of   | the territ | ory         |            |             |              |                 |                    |
| ☐ Tourism  |            |             |            |             |              |                 |                    |
| ☐ None   |            |             |            |             |              |                 |                    |
|  |            |             |            |             |              |                 |                    |
|  |            |             |            |             |              |                 |                    |
| How do you asse  |            |             |            | ne initiati | ves organize | ed by Circeo I  | National Park?     |
| You can mark on  | y one an   | swer per    | row        |             |              |                 |                    |
|  | I          | l don't kno | ow Ine     | existent    | Low          | Sufficient      | High               |
| ocal press   |            |             |            |             |              |                 |                    |
|  |            |             |            |             |              |                 |                    |
| ocial Networks   |            |             |            | $\simeq$    |              |                 |                    |
| ocial Networks<br>lewsletter                               |            |             |            |             |              |                 |                    |

### **Participation**

| 11. | Which of the following Circeo National Park initiatives did you participate? * You can mark one or more answers    |
|-----|--|
|     | ☐ Training activities  |
|     | ☐ Park Plan meetings   |
|     | ☐ Meetings with farmers  |
|     | ☐ Meetings with touristic operators  |
|     | ☐ Promotional meetings   |
|     | ☐ Cultural heritage meetings   |
|     | ☐ Biodiversity meetings  |
|     | ☐ Deterioration and environmental pollution meetings   |
|     | □ None   |
| 12. | If you did not participate in any initiative, why? You can mark only one answer                                    |
|     | I was aware of it, but I'm not interested in this kind of initiative   |
|     | I was aware of it, but I never got a chance/time/opportunity to participate  |
|     | I was not aware of it, but I would not have participated anyway  |
|     | I was not aware of it, but I would have considered whether to participate  |
|     | Other:   |
| 13. | Which of the following Circeo National Park touristic events did you participate? You can mark one or more answers |
|     | ☐ Environmental education  |
|     | ☐ Food and wine  |
|     | ☐ Cultural conferences   |
|     | ☐ Summer initiatives   |
|     | ☐ Sport initiatives  |
|     | ☐ Guided tours   |
|     | □ None   |
| 14. | If you did not participate in any initiative, why? You can mark only one answer                                    |
|     | I was aware of it, but I'm not interested in this kind of initiative   |
|     | I was aware of it, but I never got a chance/time/opportunity to participate  |
|     | I was not aware of it, but I would not have participated anyway  |
|     |  |
|     | I was not aware of it, but I would have considered whether to participate  |

|  | Not available                  | Hardly available | Quite available | Very available |
|--|--------------------------------|------------------|-----------------|----------------|
| eetings with<br>nabitants of Circeo<br>tional Park   |                                |                  |                 |                |
| leetings with orkers   |                                |                  |                 |                |
| aining<br>eetings  |                                |                  |                 |                |
| ocus groups to<br>olve conflicts   |                                |                  |                 |                |
| 1 1 1 1 1 1  |                                |                  |                 |                |
| In order to improve the n<br>available to use the follor<br>You can mark only one an   | wing services? *               |                  | k and communica |                |
| You can mark only one an Information desk  | wing services? * nswer per row |                  |                 |                |
| In order to improve the navailable to use the follow You can mark only one as Information deskat the visitor centre                                  | wing services? * nswer per row |                  |                 |                |
| In order to improve the navailable to use the follow You can mark only one an Information desk   | wing services? * nswer per row |                  |                 |                |
| In order to improve the navailable to use the follow You can mark only one an Information desk at the visitor centre Discussion forum on the website | wing services? * nswer per row |                  |                 |                |

### **Perception of Circeo National Park benefits**

This section wants to evaluate which benefits of Circeo National Park are important for the well-being of society and citizens. Therefore, it will ask to assess the importance of some benefits for social well-being and then for personal well-being.

|  | ider the following statements are true? *  |   |
|--|--|---|
| You can ma   | rk only one answer per row   | Yes No I don't know   |
| Agricultu  | ral goods are cultivated in some areas of Circeo National Park   |   |
|  | fishes and mussels are caught in Paola Lake  |   |
| _  | ushrooms is possible in some areas of Circeo National Park ecial license   |   |
|  | tional Park vital spaces, refuges and protection areas for   |   |
|  | nimal species  |   |
| _  | on of Circeo National Park has an important role in the soil   |   |
| erosion c  | ents of Circeo National Park has an important role in the  |   |
| air purific  |  |   |
|  | ents of Circeo National Park has an important role in the  |   |
|  | n, touristic and sport activities are possible in different areas<br>tional Park   |   |
|  | as of Circeo National Park have landscape values and provide<br>or human health  |   |
| Some are   | as of Circeo National Park have educational and scientific val   | ue ( ) ( )  |
| for the SOCI   | lowing groups of benefits provided by Circeo National Park. \ AL well-being? * rk only one answer  | Which group is the most important   |
|  |  |   |
|  | Description  | Examples  |
| Provisioning   | Benefits obtained from the consumption of resources and  | Oxygen  |
| Provisioning   | -  | •   |
| Provisioning<br>Regulating                           | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the   | Oxygen Water Food Climate regulation  |
|  | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the  | Oxygen Water Food Climate regulation Water depuration   |
|  | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the   | Oxygen Water Food Climate regulation Water depuration Soil erosion control  |
|  | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments   | Oxygen Water Food Climate regulation Water depuration   |
| Regulating   | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species  |
| Regulating   | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature                                   |
| Regulating   | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity                 |
| Regulating   | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature                                   |
| Regulating  Cultural                                 | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity                 |
| Regulating  Cultural                                 | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and aesthetic experiences  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity                 |
| Regulating  Cultural  Pro                            | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and aesthetic experiences  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity                 |
| Regulating  Cultural  Pro Regulating                 | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and aesthetic experiences  | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity Aesthetic value |
| Regulating  Cultural  Pro Reg Soc 20. And wh         | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and aesthetic experiences  ovisioning gulating cio-cultural  sich group is the second most important for the SOCIAL well-terms and the consumption of resources and raw materials produced by nature | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity Aesthetic value |
| Regulating  Cultural  Pro Rep Soc 20. And wh You car | Benefits obtained from the consumption of resources and raw materials produced by nature  Benefits related to natural functions that allow the maintenance of human health and the functioning of the environments  Benefits population gets from nature, through spiritual enrichment, cognitive development, recreational and aesthetic experiences  povisioning gulating  cio-cultural  sich group is the second most important for the SOCIAL well-to mark only one answer per row   | Oxygen Water Food Climate regulation Water depuration Soil erosion control Habitat for species Recreation activities Educational values Wellness of being in nature Sense of identity Aesthetic value |

### 21. Consider the following list of benefits provided by Circeo National Park. Evaluate each of them based on what you consider important for your PERSONAL well-being \*

You can mark only one answer per row

|                                   | Photo | Description   | Examples                                   |
|-----------------------------------|-------|---|--|
| Food from<br>agriculture          |       | Crops for human consumption<br>from agricultural areas of CNP<br>(Molella, Palazzo, Sant'Andrea,<br>etc.) | Turnips, Carrots,<br>Watermelons, Zucchini |
| Food from<br>aquaculture          |       | Fish for human consumption from Paola Lake  | Mussels, clams, mullets                    |
| Food from<br>mushrooms<br>picking |       | Wild edible mushrooms in the areas of CNP   | Different types of mushrooms               |

#### Not important Not very important Quite important Very important

| Food from agriculture       |  |  |
|-----------------------------|--|--|
| Food from aquaculture       |  |  |
| Food from mushrooms picking |  |  |

### 22. Consider the following list of benefits provided by Circeo National Park. Evaluate each of them based on what you consider important for your PERSONAL well-being \*

You can mark only one answer per row

|                         | Photos | Description  | Examples   |
|-------------------------|--------|--|--|
| Habitat for<br>species  | 2 2 2  | Provision of suitable living and nursing places for wild species | Birds, Wild boards, Fallow<br>deers  |
| Soil erosion<br>control |        | Role of vegetation root matrix and soil biota in soil retention  | Retention of soil via plants roots   |
| Air purification        |        | Role of natural ecosystems in the air decontamination            | Clean air  |
| Water<br>purification   |        | Filtering, retention and storage of fresh water                  | Clean water for<br>consumptive use<br>(drinking, irrigation and<br>industrial use) |

#### Not important Not very important Quite important Very important

| Habitat for species  |  |  |
|----------------------|--|--|
| Soil erosion control |  |  |
| Air purification     |  |  |
| Water purification   |  |  |

#### 23. Consider the following list of benefits provided by Circeo National Park. Evaluate each of them based on what you consider important for your PERSONAL well-being \*

You can mark only one answer per row

Nature recreation

activities Aesthetic value

and science

|  | Photos | Description   | Examples   |
|--|--------|---|--|
| Nature recreation<br>activities                  |        | Possibility to benefits by outdoor, touristic, and sportive activities by natural ecosystem                       | Hiking, Cycling, Bathing,<br>Birdwatching                        |
| Aesthetic value<br>and tranquillity<br>of nature |        | Attractive landscape features<br>and peaceful landscape for the<br>human physical and<br>psychological well-being | Pleasure of beautiful<br>views<br>Pleasure of being in<br>nature |
| Environmental<br>education and<br>science        |        | Ecosystem features of educational and scientific value  | School visits and<br>Research                                    |

# Not important Not very important Quite important Very important and tranquillity of nature **Environmental education**

#### **Personal information**

This section will ask some personal information for purely statistical purposes. Remember that the questionnaire is anonymous, and the data collected will be treated in an aggregate manner, in compliance with the law on privacy.

| 24. | Gender                              | anawar.  |                   |       |
|-----|-------------------------------------|----------|-------------------|-------|
|     | You can mark only one               | answer   |                   |       |
|     | M                                   | F        | Rather not answer |       |
| 25. | Age                                 |          |                   |       |
|     | You can mark only one               | answer   |                   |       |
|     | 18-24                               | 25-34    | 35-44             | 45-54 |
|     | 55-64                               | 65-74    | 75 and more       |       |
| 26. | Nationality                         |          |                   |       |
|     | You can mark only one               | answer   |                   |       |
|     | Italian                             |          |                   |       |
|     | Other:                              |          |                   |       |
|     |                                     |          |                   |       |
| 27. | Qualification You can mark only one | answer   |                   |       |
|     | Elementary scho                     | al.      |                   |       |
|     | Middle school                       | OI .     |                   |       |
|     | High school                         |          |                   |       |
|     | University                          |          |                   |       |
|     | Master                              |          |                   |       |
|     | Ph.D.                               |          |                   |       |
|     | None                                |          |                   |       |
|     |                                     |          |                   |       |
| 28. | Occupation You can mark only one    | answer   |                   |       |
|     |                                     |          |                   |       |
|     | Full time worker                    |          |                   |       |
|     | Part time worker                    |          |                   |       |
|     | Unemployed                          |          |                   |       |
|     | Inactive                            |          |                   |       |
|     | Student/Professi                    |          |                   |       |
|     | Unpaid work exp                     |          |                   |       |
|     | Retired or Cessat                   |          |                   |       |
|     | Disabled and/or                     |          |                   |       |
|     | Housework or as                     | sistance |                   |       |
|     | Other:                              |          |                   |       |

| 29. | Business sector You can mark one or more answers                   |
|-----|--|
|     | $\square$ Agriculture, Livestock, and Forestry                     |
|     | ☐ Fishing and Aquaculture  |
|     | $\square$ Industry and Crafts (transformation of raw materials)    |
|     | ☐ Buildings  |
|     | ☐ Wholesale and retail trade                                       |
|     | $\square$ Hotel and catering sector                                |
|     | $\hfill\square$ Rental, travel agencies, business support services |
|     | ☐ Transport and storage  |
|     | $\hfill\square$ Financial, insurance and real estate activities    |
|     | $\hfill\square$ Professional, scientific and technical activities  |
|     | ☐ Education  |
|     | $\square$ Public administration and defence                        |
|     | ☐ Other activities   |
| 30. | Residence *  |
|     | You can mark only one answer                                       |
|     | Sabaudia   |
|     | San Felice Circeo  |
| 31. | How long have you lived here?<br>You can mark only one answer      |
|     | Always   |
|     | Less than 5 years  |
|     | More than 5 years  |

### 32. Consider the areas delimited by black lines and marked with coloured letters on the map. In which area is his house located? \*

You can mark only one answer



Area with letter A
Area with letter B
Area with letter C
Area with letter D
Area with letter E
Area with letter F
Area with letter G

### 33. Consider the same areas as the previous map. In which area is your main working activity? \* You can mark only one answer



| Area with letter A       |                  |
|--------------------------|------------------|
| Area with letter B       |                  |
| Area with letter C       |                  |
| Area with letter D       |                  |
| Area with letter b       |                  |
| Area with letter E       |                  |
| Area with letter F       |                  |
| Area with letter G       |                  |
| In none of the areas mar | ked with letters |
| I don't have a job       |                  |

#### APPENDIX VII - CIRCEO NATIONAL PARK ZONING MAP (ENTE PARCO NAZIONALE DEL CIRCEO, 2011e)

